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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/019,161      | 03/01/2002  | Isabelle Betremieux  | 119464              | 1665             |

26316 7590 07/25/2003

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| EXAMINER |
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FORTUNA, JOSE A

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| ART UNIT | PAPER NUMBER |
|----------|--------------|

1731

DATE MAILED: 07/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |
|------------------------------|------------------------|---------------------|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |
|                              | 10/019,161             | BETREMIEUX ET AL.   |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |
|                              | José A Fortuna         | 1731                |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 19 December 2001.

2a) This action is **FINAL**.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-20 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

|   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>12/19/01</u> . | 6) <input type="checkbox"/> Other: _____ .                                   |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Verdol et al., US Patent No. 3,444,151, cited in the Information Disclosure Statement filed on December 19, 2001.

Regarding claims 1 and 11, Verdol et al. teach a process for producing an aqueous cationic dispersion of polymers in which said polymers are prepared by the emulsion polymerization technique, using an imidized styrene/maleic anhydride copolymer as the surfactant, see abstract. In the abstract they also teach the same ratio of styrene to maleic anhydride of claims 2-3, see also examples and column 5, lines 46-65, and teach in the same column the molecular weight of copolymer as claimed in claims 4 and 5. The degree of imidization of claim 6 is taught in column 2, lines 59-72 and the examples. Verdol et al. teach the use of dimethylpropylene diamine as one of the amines, see column 5, lines 6-11. Regarding claims 8-10, the different monomers of hydrophobic character are taught in column 6, line 20 through column 7, line 22. Regarding claims 12-13, Verdol et al. teach the size of the particles in the same range as claimed, see column 9, lines 21-26 and column 10, lines 16-17. Regarding claims 14-15, Verdol et al. are silent with respect to the glass transition temperature of the emulsion, but since Verdol et al. teach the same reactant polymers and the same method of making the emulsion it

follows that the emulsion **Must** have the same properties and therefore, the  $T_G$  of the emulsion is inherent. Note also that the molecular weight and the ratio of polymers fall within the claimed range see above.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
  1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claims 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verdol et al. cited above.

Verdol et al. do not explicitly teach the use of emulsion as a sizing agent in the papermaking operation. However, the use of the emulsion as such, i.e. a sizing agent, would have been obvious to one of ordinary skill in the art since they teach that the emulsion has water repellent characteristic and that can be used as a paper coating, see column 1, lines 56-65. Note that surface sizing is a coating process and therefore, the use of the use of the emulsion as a sizing agent anticipated or at least obvious to one of

ordinary skill in the art. Regarding the use of other sizing agent in the formulation, this is conventional in the art and within the levels of skill in the art as an optimization of a result effective variable. Note also that starch is one of the most common sizing/strength agents in the papermaking industry and therefore its use along with the claimed emulsion would have been obvious.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure in the art of "Paper Sizing Agents."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to José A Fortuna whose telephone number is 703-305-7498. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on 703-308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0662.

  
José A Fortuna  
Primary Examiner  
Art Unit 1731

JAF  
July 25, 2003